

NOTES ON NEW ZEALAND POLYPLACOPHORA, WITH
DESCRIPTIONS OF FIVE NEW SPECIES.

By HENRY SUTER.

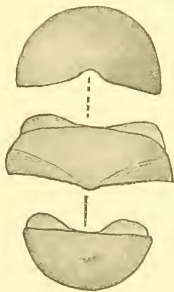
Read 12th April, 1907.

ISCHNOCHITON (s.str.) CONTRACTUS (Reeve).

This species, which is in the Cuming Collection as from New Zealand, and was placed by me amongst the species doubtfully occurring in the New Zealand seas,¹ has been again met with. Capt. J. Bollons kindly gave me a specimen which he collected at the Auckland Islands. It is a young example, having a length of 9 mm. only, and most of the valves are broken. The colour is yellowish white, with three longitudinal rows of brown spots. The sculpture consists of the characteristic ziczac wrinkles, which are very delicate, as might be expected in such a young specimen.

ISCHNOCHITON (s.str.) LUTEOROSEUS, n.sp.

Shell very small, elongately oval, minutely granulate, uniformly pink or yellowish, with longitudinal pink bands. Anterior valve with a posterior rounded sinus, finely granulated in quineuncial pattern, as is the surface of all the other valves. Intermediate valves with



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the lateral areas hardly raised, and not well defined; slightly beaked, and the jugum sharply rounded. Posterior valve with a central mucro, a slight transverse impression below it, the posterior slope straight. Girdle scaly, scales roundish, imbricating, flatly convex,

¹ Proc. Malac. Soc., vol. ii, p. 200.

smooth, and of equal size. Colour pink, but mostly yellowish with concentric pink bands on the head valve, longitudinal, usually three on each side, on the intermediate valves, and mostly absent on the tail valve; these bands are slightly undulating or zigzagging.

Interior bright pink, sinus broad and smooth, sutural laminae broadly rounded. Anterior valve with 11 slits at irregular distances, intermediate valves with 1 slit on each side, posterior valve with 8 slits; corresponding with the slits there are radiate fine white lines in all valves. Length 5, breadth 3 mm.; divergence 80°.

Hab.—A few specimens and a number of valves in sand dredged in 50 fathoms near the Bounty Islands by Capt. J. Bollons.

To judge from the valves gathered, the species will attain a slightly larger size, but most of my specimens are considerably smaller.

The smallness, colour, and absence of radiating sculpture distinguish this species from the other New Zealand forms of the genus. Type in my collection.

CALLOCHITON ILLUMINATUS (Reeve).

A young specimen, only 5 mm. long, kindly given me by Capt. J. Bollons, was found amongst dredgings in 50 fathoms near the Snares Islands. The specimen is semi-transparent, dirty-white, has the characteristic girdle-scales of the genus, and the sculpture of the species; there are only five elevated threads on each side of the central areas. The first known occurrence of this species in New Zealand waters was recorded by the writer in 1897.¹

CALLOCHITON SULCULATUS, n.sp.

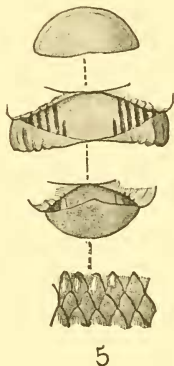
Shell very small, oval, angularly raised, side-slopes straight, central areas laterally grooved, colour light fulvous. Anterior valve smooth, with a few fine growth-lines, the whole surface dotted with small black eyes. Intermediate valves having the jugum sharply rounded, central areas microscopically longitudinally closely striate, on each side 4 to 5 deep grooves, twice as broad as the ribs, the innermost groove extending only over half the length; lateral areas distinctly raised, microscopically radially striate, with numerous eyes, flatly and broadly nodulous by a few concentric furrows, more pronounced near the margins; sutures crenate. Posterior valve smooth, with many eye-dots; mucro in front of the middle, low; posterior slope slightly concave. Girdle with elongated, pointed, and slightly keeled smooth scales. Colour light fulvous, darker on the end-valves and lateral areas; girdle white, with fulvous patches. Interior pinkish-white; anterior valve with 14, median valves with 2, and posterior valve with 10 slits; teeth blunt, propped up on the outside; cavities spongy; the low and broadly rounded sutural laminae continuous across the shallow sinus.

The approximate dimensions are: length 9, width 6 mm.; divergence 105°.

¹ Proc. Malac. Soc., vol. ii, p. 185.

Hab.—One specimen amongst material dredged by Mr. R. Henry in 30 fathoms, Dusky Sound.

Type in my collection. With regard to sculpture of the lateral areas this species stands between *C. empleurus* and *C. illuminatus*; the



former, however, has 4, the latter only 1 slit on the intermediate valves. In Journ. Malac., xii, p. 65, I stated that the median valves of *C. empleurus* had 3 slits, but 4 is the correct number.

CHITON TORRI, n.sp.

Shell small, elongate, smooth, dark brown. Anterior valve with eleven indistinct riblets, obsolete in one specimen, crossed by fine growth-lines, the whole surface minutely wrinkled. Of the intermediate valves the first is twice as long as the others, all of them are broadly rounded, smooth, and beaked, the central areas with minute transverse zigzag wrinkles; jugum smooth; lateral areas slightly raised, with concentric ridges, very distinct near the margins, but gradually disappearing towards the centre, the whole minutely wrinkled. Posterior valve with the mucro central, low, posterior slope strongly convex, a few concentric ridges near the margin, surface wrinkled like the other valves. Girdle with small, rounded, smooth, imbricating scales. Colour dark brown, somewhat lighter on the central and lateral areas; girdle darker brown, nearly black. Interior light brown, sinus microscopically denticulate, sutural laminæ moderately high, and broadly rounded. Anterior valve with 11 slits, teeth sharp and pectinate, irregular in size. Intermediate valves with 1 slit on each side. Posterior valve with a low insertion plate, having 12 slits, the teeth thick and blunt, with one or two grooves on the outside. Length 9, breadth 4.5 mm.; divergence 100°.

Hab.—Bluff, South Island (Dr. Torr).

Two specimens were found by Dr. W. G. Torr, of Brighton, South Australia, during his travels in New Zealand some years ago, and most kindly presented to me. It is easily distinguished from all other New Zealand species of the genus by the almost total smoothness,

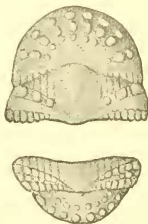


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the small size, and the microscopic wrinkles. It is nearest allied to *C. Sinclairi*. It affords me great pleasure to unite the name of its discoverer with the species. Type in my collection.

CHITON CLAVATUS, n.sp.

Shell small, elongated oval, acutely raised, surface of all valves minutely shagreened, with nodulous sculpture, colour grey, some



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valves brown. Anterior valve with 8 radiate ribs, each consisting of three flatly convex nodules, the uppermost small and round, the

following large and squarish, the lowest a little smaller and oblong; posterior margin crenulate. Intermediate valves have the first longer than the others, sharply angled, and slightly beaked; central areas with 5 to 6 deep longitudinal furrows on each side; lateral areas raised, with an anterior and posterior broad rib bearing flatly raised, squarish nodules which are more numerous on the posterior rib; seventh valve having a few central nodules on the lateral areas marking a third rib; sutures strongly and bluntly crenulated. Posterior valve with two concentric rows of round nodules, representing 10 radiate ribs; mucro slightly in front of the middle, small and pointed, posterior slope straight. Girdle with rather large imbricating, convex, and smooth scales, smaller on the inner side. Colour of valves 1, 2, 7, 8 ash-grey, the other valves greyish-brown with white spots along the ridge; girdle uniformly grey. Interior: anterior valve with 8, intermediate valves with 1, and posterior valve with 11 slits; teeth pectinate. Length 14, breadth 9 mm.; divergence 95° .

Hab.—Rangitoto Island, near Auckland, between tide-marks (H. S.).

Of the New Zealand species *C. limans*, Sykes, is the nearest, from which, however, it is easily separated by the smooth, not sharply raised tubercles, and the rounded, not pointed, and smooth scales. Only one specimen was found, now in my collection.

LORICA (s.str.) VOLVOX (Reeve).

In my revision of the New Zealand Polyplacophora¹ I placed the above species amongst those doubtful for New Zealand, as there was then no convincing evidence that the species really lived in New Zealand waters. Two years ago an intermediate valve was dredged in 25 fathoms near Channel Island, Hauraki Gulf, but I could not be quite sure whether it represented *L. volvox* or not. Fortunately some months ago Capt. J. Bollons brought me a good specimen of this species, which he obtained from buoy moorings in 20 fathoms near Whale Rock, Bay of Islands. It agrees with specimens in my collection from South Australia and Port Jackson, but the threads on the central areas are somewhat closer together; otherwise there is no difference. The species has therefore to be added again to the list of the New Zealand fauna.

ONITHOCHITON NODOSUS, n.sp.

Shell small, elongately ovate, shining, flesh colour, variegated with white and brown, lateral areas with nodulous ribs. Anterior valve with about 20 radiate nodulous riblets, crossed by four concentric furrows; about 14 radiate rows of minute silvery eyes. Intermediate valves slightly beaked, with the jugum sharply rounded; central areas minutely punctate, with longitudinal ridges in front of the lateral areas, short near the centre, but extending nearly the whole length on approaching the margins; several transverse furrows extend over the central areas and jugum. Lateral areas scarcely raised, with

¹ Proc. Malac. Soc., vol. ii, p. 200.

three nodulous ribs, the two posterior ones close together, sutures slightly crenulated; one row of eyes between the first and second rib. Posterior valve with the mucro terminal, minutely punctate, a concentric marginal row of nodules, interspersed with eyes. Girdle narrow, leathery (dry specimen!), with narrow white stripes below the sutures. Colour light pink over the jugum, minutely dotted with white, margined by rows of triangular white spots; central and lateral areas reddish brown, variegated with white on some of the intermediate valves.

Anterior valve with 10 irregularly spaced slits, teeth pectinate; intermediate valves with 1 slit on each side; posterior valve with a low, smooth, and rounded callus. Length 17, breadth 7 mm.; divergence 70°.



Hab.—Foveaux Strait, in 18 fathoms (Capt. J. Bollons), one specimen.

The specimen was kindly lent me by Miss Mestayer, of Wellington. As the shell contains the dried-up animal, which I did not venture to remove, the inside could not be described. I have an anterior and intermediate valve dredged in 10 fathoms near Open Bay Island, west coast of the South Island, also obtained from Capt. J. Bollons, which belong to a nearly allied species. The anterior valve has two concentric rows of nodules near the margin, eight radiate rows of eyes, the whole of the smooth surface covered with minute white dots; there are 8 slits, the teeth pectinate. Inside purple in the centre. The intermediate valve is flesh-colour like the anterior valve, minutely dotted with white, central areas with a number of low wrinkles in front of the lateral areas, the latter with two radiate rows of rounded nodules, between which the eyes are situated. Sinus deep, flat, minutely denticulate, sutural laminae short, broadly rounded. One slit on each side, the valve callus distinct, white, the remainder light purple. Divergence 90°. *O. nodosus* is no doubt closely allied to *O. rugulosus*, Angas, from Port Jackson, Australia. Type in Miss Marjorie K. Mestayer's collection.